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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,396	08/30/2001	Nancy Allbritton	P677c	4207

7590 02/24/2003

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EXAMINER
DAVIS, DEBORAH A

ART UNIT	PAPER NUMBER
1641	

DATE MAILED: 02/24/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,396	ALLBRITTON ET AL.	
	Examiner	Art Unit	
	Deborah A Davis	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *48-102* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *48-102* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Election/Restrictions

I. Claims 48-81 are drawn to a method for measuring the activity of intracellular chemical reactions in a cell, applying laser shockwave in medium to stop reaction classified in class 436 subclass 147.

II. Claim 82 is drawn to an apparatus for measuring chemical reactions in intracellular molecules, providing an intracellular reporter to disrupt reaction classified in class 436 subclass 63.

III. Claims 83-93 are drawn to an apparatus comprising a cell selector a laser generating shockwave and a substrate collector, classified in class 422 subclass 82.05.

IV. Claim 94 is drawn to an apparatus for measuring an activity of intracellular chemical reactions of molecules in a cell comprising a means for disposing a substrate molecule and a second means for disrupting a chemical reaction and for detecting, classified in class 422 subclass 58.

V. Claims 95-96 are drawn to a method for measuring intracellular chemical reactions of molecules in a cell comprising, liberating substrate molecules and altered substrate molecules from cell, spatially separating substrate

and altered molecules and comparing reactions between said altered and substrate molecules, classified in class 424 subclass 1.17.

VI Claim 97 is drawn to a method using a minute volume of 100 picoliters or less comprising disposing a substrate molecule into minute volume wherein chemical reaction occurs and terminating said reaction, classified in class 435 subclass 7.71.

VII. Claim 99 is drawn to an apparatus, comprising a means for disposing labeled substrate molecule, a means for liberating substrate molecule, a means for separating a substrate molecule and a means for isolating and detecting reactions of a single species of intracellular molecules, classified in class 435 subclass 183.

VIII. Claim 100 is drawn to an apparatus comprising a means for disposing substrate molecules for a single species of molecules having a label, a means for separating substrate molecules, a means for detecting substrate molecules, classified in class 436 subclass 518.

IX. Claim 101 is drawn to an apparatus comprising an interrupter, a detector of labeled substrate molecules, a sampling device communicating with said detector, sampling device extracts said substrate molecule from cell

or portion of cell and collects and transfers said substrate molecules before alteration, classified in class 422 subclass 82.09.

X. Claim 102 is drawn to an apparatus comprising a means for holding a mammalian cell a means for holding, an electrophoresis reservoir, a sharpened capillary, a reservoir and a detector, classified in class 422, subclass 68.1.

The Groups are distinct, each from the other because of the following reasons:

1. Groups I and (II-IV) (VII-X) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the method for measuring the activity of intracellular chemical reactions in a cell can be practiced by either of the materially different apparatuses of groups II-IV or VII-X.

2. Groups I, V, VI are unrelated methods. Invention I is drawn to a method for measuring the activity of intracellular chemical reactions in a cell applying laser shockwave in medium to stop said reaction. Invention V is drawn to a method for measuring intracellular chemical reactions of molecules in a cell comprising, liberating

substrate molecules and altered substrate molecules from said cell, spatially separating substrate and altered molecules and comparing reactions between said altered and substrate molecules. Invention VI is drawn to a method using a minute volume of 100 picoliters or less comprising disposing a substrate molecule into minute volume wherein chemical reaction occurs and terminating said reaction. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case each method have a different mode of operation making them patenably distinct one from the other.

3. Groups II, III, IV, VII, VIII, IX and X are unrelated. Invention II is drawn to an apparatus for measuring chemical reactions in intracellular molecules providing an intracellular reporter to disrupt said reaction. Invention III is drawn to an apparatus comprising a cell selector, a laser generating shockwave and a substrate collector. Invention IV is drawn to an apparatus for measuring an activity of intracellular chemical reactions of molecules in a cell comprising a means for disposing a substrate molecule and a second means for disrupting a chemical reaction and for detecting. Invention VII is drawn to an apparatus comprising a means for disposing labeled molecule, a means for liberating substrate molecule, a means for separating a substrate molecule and a means for isolating and detecting reactions of a single species of intracellular molecules. Invention VIII is drawn to an apparatus comprising a means for disposing substrate molecules for a single species of molecules having a label, a means for

separating substrate molecules, a means for detecting substrate molecules. Invention IX is an apparatus comprising an interrupter, a detector of labeled substrate molecules, a sampling device communicating with said detector, sampling device extracts said substrate molecule from cell. Invention X is drawn to an apparatus comprising a means for holding a mammalian cell, an electrophoresis reservoir, and a sharpened capillary. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different modes of operations making them patenable distinct one from the other. Further, the apparatus have different structural configurations.

4. Groups V and (II-IV) (VII-X) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the patenably distinct method of group V can be practiced by either of the apparatuses of groups II-IV or VII-X.

5. Groups VI and (II-IV) (VII-X) are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process.

(MPEP § 806.05(e)). In this case the method of invention VI can be practiced by either of the apparatuses of groups II-IV and VII-X.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper. Please note that classifications in the restriction are illustrative only and do not represent all the classes and subclasses which must be searched for each invention; nor is the search limited to issued US patents, but rather includes foreign patents and applications as well as literature searches, therefore restriction for examination purposes as indicated proper.

7. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah A Davis whose telephone number is (703) 308-4427. The examiner can normally be reached on 8-5 Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on (703) 305-3399. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1123.

Deborah A. Davis
CM1, 7D16
January 14, 2003

LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600
12/07/03